

WHAT IS CLAIMED IS:

- 1                   1.       A method of creating a data path for a process executing on a  
2 server coupled to a storage area network (SAN), comprising:  
3                   parameterizing a set of attributes for a desired data path between the  
4 process and a device of the SAN; and  
5                   constructing the data path that provides said set of attributes.
- 1                   2.       The method of claim 1 wherein said set of attributes includes a pre-  
2 defined template.
- 1                   3.       The method of claim 2 wherein said set of attributes includes a data  
2 path owner, application, and the server or servers on which the application is executing.
- 1                   4.       The method of claim 2 wherein said pre-defined template specifies  
2 a set of performance, availability, and cost metrics for the desired data path.
- 1                   5.       The method of claim 4 wherein said set of performance and  
2 availability metrics includes at least one of a number of threads, a security level, and a  
3 default volume size and characteristics, default path characteristics.
- 1                   6.       The method of claim 1 wherein said parameterizing step includes a  
2 step of entering a user-defined attribute for inclusion in said set of attributes.
- 1                   7.       The method of claim 6 wherein said entering step includes entry of  
2 said user-defined attribute by use of a graphical user interface coupled to the SAN.
- 1                   8.       The method of claim 1 wherein said constructing step further  
2 comprises:  
3                   searching the SAN for a set of candidate devices;  
4                   constructing a candidate data path from the server to each candidate device  
5 of said set of candidate devices;  
6                   evaluating each said candidate data path against a selection metric to rank  
7 said candidate data paths from a best candidate data path to a least best candidate data  
8 path according to said selection metric; and

9 selecting said best candidate data path as the data path to be constructed by  
10 said constructing step.

1 9. The method of claim 1 wherein said constructing step further  
2 comprises:  
3 searching the SAN for a set of candidate devices;  
4 constructing a candidate data path from the server to each candidate device  
5 of said set of candidate devices;  
6 evaluating each said candidate data path against a selection metric to rank  
7 said candidate data paths from a best candidate data path to a least best candidate data  
8 path according to said selection metric;  
9 presenting said ranked candidate data paths to a user for selection; and  
10 selecting a user-selected candidate data path as the data path to be  
11 constructed by said constructing step.

1 10. The method of claim 9 wherein said presenting step recommends  
2 said best candidate data path for selection by said user.

1 11. The method of claim 10 wherein said best candidate data path is  
2 presented as a default selection at said selecting step.

1 12. The method of claim 9 wherein said selection metric includes  
2 device uptime information.

1 13. The method of claim 9 wherein said selection metric includes  
2 performance information.

1 14. The method of claim 9 wherein said selection metric includes cost  
2 calculation.

1 15. The method of claim 9 wherein said selection metric includes best  
2 SAN practices information.

1 16. The method of claim 9 wherein said selection metric includes  
2 learned state and usage information of the SAN.

1           17.     The method of claim 9 wherein said searching step prequalifies a  
2 subset of candidate data paths by finding those candidates that satisfy a pre-created policy  
3 prior to application of said evaluating step.

1           18.     The method of claim 1 wherein said constructed data path includes  
2 all physical, logical and security component identification and configuration information  
3 sufficient to operably link the process to an identified data volume of the SAN.

1           19.     A method of configuring a SAN, comprising:  
2           discovering, by use of a data path engine coupled to the SAN, processes  
3 that are operable on a server coupled to the SAN;  
4           discovering, by use of said data path engine coupled to the SAN, devices  
5 that are included in the SAN;  
6           responding, by use of said data path engine coupled to the SAN, to a data  
7 path construction request from a user by providing said user with an interface to accept a  
8 set of attributes for a desired data path for one of said discovered processes; and  
9           constructing, by use of the DataPath Engine coupled to the SAN, the data  
10 path that provides said set of attributes.

1           20.     Apparatus for creating a data path for a process executing on a  
2 server coupled to a storage area network (SAN), comprising:  
3           means for parameterizing a set of attributes for a desired data path between  
4 the process and a device of the SAN; and  
5           means, coupled to said parameterizing means, for constructing the data  
6 path that provides said set of attributes.